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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,532	08/01/2001	John Canning	CU-2533 RJS	5910

7590

12/20/2002

Thomas F Peterson
Ladas & Parry
224 South Michigan Avenue Suite 1200
Chicago, IL 60604

EXAMINER

WARREN, MATTHEW E

ART UNIT	PAPER NUMBER
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2815

DATE MAILED: 12/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,532

Applicant(s)

JOHN CANNING

Examiner

Matthew E. Warren

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other:

DETAILED ACTION

Claim Objections

Claim 8 is objected to because of the following informalities: the phrase "wherein the waveguides are be formed" contains incorrect grammar. Appropriate correction is required. Please keep in mind that it is the applicant's responsibility to make sure that the specification and claims are free of errors.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 3, 5, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Amersfoort et al. (US 5,805,755).

In re claim 1, Amersfoort et al. shows (fig. 1) a laser system comprising at least one array of closely spaced diodes 12 arranged to emit radiant pump energy (col. 2, lines 33-45), and a plurality of waveguides 14 spaced adjacent the array, each

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waveguide being arranged to lase upon exposure to the radiant pump energy emitted from the diodes.

In re claim 2, the waveguides lase at different frequencies (col. 7, lines 37-39).

In re claim 3, the system further comprises a coupler (16) for coupling laser outputs of individual ones of the waveguides to form a combined laser output.

In re claim 5, the plurality of waveguides comprise a series of optical fibers (col. 2, line 40).

In re claim 7, the waveguides form a multi-mode interference device (col. 1, lines 49-67).

In re claim 8, the waveguides are formed as part of a multimode waveguide structure which can be interconnected to a single mode waveguide (col. 1, lines 60-64).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amersfoort et al. (US 5,805,755) as applied to claim 1 above, and further in view of Scifres et al. (Re. 33, 722).

Amersfoort et al. does not show the reflection means as recited in claim 4 and the planar waveguide as recited in claim 6.

In re claim 4, Scifres et al. shows (fig. 16) a waveguide 111 for a laser system which further comprises a reflection means 127 spaced closely adjacent the waveguides and the array for reflecting the radiant pump energy emitted from the array back onto the waveguides. With this configuration the laser produces coherent light output (col. 9, lines 4-24)

In re claim 6, Scifres et al. shows (fig. 16) a laser system wherein the plurality of waveguides (103, 105, 107) comprise a series of planar waveguides for a specific stacking arrangement.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the waveguide of Amersfoort by placing a mirror at the end of the waveguide as taught by Scifres to produce a coherent light output.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shen et al. (US 6, 213,998 B1), Henry et al. (US 5,887,097), and Po et al. (US 5,268,978) also disclose laser diode arrays coupled to waveguides.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (703) 305-0760. The examiner can normally be reached on Mon-Thurs, and alternating Fri, 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for


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the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MEW

December 15, 2002



EDDIE LEE
SUPERVISOR, FIRST AMMUNITION
TECHNICAL SERVICES DIVISION